

Remarks

Claims 1-4, 6-19, and 21-27 are pending in the application with claims 2, 3, 13, 16, 19, 26, and 27 amended herein. The amendment to claims 2, 3, 13, 19, and 27 merely corrects typographical errors or antecedent basis.

Some of the references listed in the Information Disclosure Statement dated 19 April 2006 were not considered for lack of proper citation format. However, Cite No. 4 under Foreign Patent Documents was lined-out as not being considered even though the citation format is proper and a document copy was provided, as indicated in the Office's PAIR System. Applicant requests consideration of the cited reference.

Claim 16 stands rejected under 35 USC 112, second paragraph, for indefiniteness and is amended herein to clarify. Applicant requests withdrawal of the rejection.

Claim 26 stands objected to for double patenting and is amended herein to change the dependency. Applicant requests withdrawal of the objection.

Claims 1-4, 6-19, and 21-27 stand rejected under 35 USC 103 for obviousness over GB 1,086,753 (hereinafter, GB) in view of Diamond, et al., Handbook of Imaging Materials (hereinafter, Diamond). Applicant requests reconsideration.

Claim 1 sets forth a method that includes, among other features, dissolving a solid charge adjuvant in a carrier liquid aided by heating the carrier liquid and then mixing the dissolved charge adjuvant with a thermoplastic resin and carrier liquid. The method includes grinding the mixture to form toner particles and adding a charge director to charge the toner particles. Pages 3-4 of the Office Action allege that GB discloses every limitation except for heating the carrier liquid, the thermoplastic resin, and adding the charge director. The Office Action relies on inferences and Diamond to remedy the deficiencies.

Page 2 of the Office Action alleges that GB discloses an aluminum tristearate charge adjuvant. However, page 1, lines 47-52 of GB states that its invention pertains to positively charged particles. Applicant notes that the 5th full paragraph on page 244 of Diamond lists aluminum tristearate as a charge

director (charge control agent), instead of a charge adjuvant, for positive toners. Additionally, page 1, line 20 of the present specification incorporates by reference US 4,707,429, which also lists metallic soaps as charge directors, instead of charge adjuvants, for positive toners in column 5, lines 6-9. Since aluminum tristearate is a metallic soap, it follows that those of ordinary skill would consider it to be a charge director for positively charged particles, as in GB.

Applicant notes that GB is silent regarding the designation of any charge director or charge adjuvant. GB merely lists compounds without describing their function. Page 2 of the Office Action alleges that the amine listed on page 1, line 60 of GB “appears to be a charge director,” but does not present evidence in support of the conclusion. Neither Diamond nor US 4,707,429 include amines in their lists of suitable charge directors for positive toners.

The Office otherwise fails to provide substantial evidence in support of its allegation. Under the Administrative Procedure Act (APA) applicable to the Office’s allegation, the standard of review applied to findings of fact is the “substantial evidence” standard. See, In re Gartside, 203 F.3d 1305, 1315, 53 USPQ2d 1769, 1775 (Fed. Cir. 2000). See also MPEP § 2144.03 (2007). Essentially, the Office’s allegation appears to assume it is well-known that the amine is a charge director for positively charged particles. Applicant asserts this fact is not well known. It is not permissible for the Office to base rejections on unsupported assumptions.

Additionally, the two referenced prior art documents list metallic soap as a charge director, instead of a charge adjuvant, for positive toners. GB is silent as to the function of the amine in its liquid toner compositions and the Office Action does not provide substantial evidence in support of some conclusion as to its function. It does not necessarily follow that the amine is a charge adjuvant. “The mere fact that a certain thing may result from a given set of circumstances is not sufficient to establish inherency.” In re Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (citations omitted) (emphasis in original); MPEP § 2112. Further, “[i]n relying upon the theory of

inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis added); MPEP § 2112. At least for such reasons, the cited combination cannot be considered to suggest dissolving a solid charge adjuvant in a carrier liquid, as set forth in claim 1.

Pages 2-3 of the Office Action allege that GB suggests the dissolving as being aided by heating the carrier liquid on page 1, lines 68-74. However, review of the referenced text reveals that its meaning is not appropriately construed. GB states, "both materials (1) and (2) must be present and should be in solution at the temperature used for image development." The term "image development" refers to the process on page 1, lines 33-38 when toner particles migrate "to the image surface under influence of the image charge." It follows that the metal salt of an organic acid (1) and the amine (2) "should be in solution," as opposed to being in a precipitate or other solid form during image development.

Claim 1 sets forth that dissolving the solid charge adjuvant is aided by heating the carrier liquid. Applicant asserts that the disclosure in GB regarding materials (1) and (2) being in solution at the temperature of image development does not bear a rational relation to dissolving a solid material by heating a carrier liquid. Even though GB describes materials (1) and (2) as being in solution, it does not provide evidence of how they were dissolved. Evidence presented by the Office must be "substantial." Unrelated or, at best, tangential evidence does not satisfy the requirement of providing substantial evidence. At least for such reasons, the cited combination cannot be considered to suggest the claimed limitation.

Claims 2-4, 6-19, and 21-27 depend from claim 1 and are patentable at least for such reason as well as for the additional limitations of such claims not suggested. For example, claim 2 sets forth that the mixing and grinding includes mixing the thermoplastic resin with carrier liquid, heating the mixture of

carrier liquid and thermoplastic resin to plasticize the resin, and cooling the plasticized resin. The dissolved charge adjuvant is added to the cooled plasticized resin and the mixture of charge adjuvant and plasticized resin is ground to form toner particles. Fig. 4 of the present specification and the text associated therewith, including Experiment B, describe one example of a method encompassed by claim 2. The cited combination does not disclose and the Office Action does not allege that it discloses mixing dissolved charge adjuvant with cooled plasticized resin, as set forth in claim 2. Claim 2 is thus further patentable.

Also for example, claim 3 sets forth mixing the thermoplastic resin with carrier liquid and dissolved charge adjuvant at an elevated temperature, cooling the mixture, and grinding the cooled mixture to form toner particles. Pages 4-5 of the Office Action alleges it is common knowledge to heat a liquid to enhance solubility of a solid in the liquid. Regardless, the proper initial question is whether it is known even to dissolve a solid charge adjuvant in a carrier liquid for a liquid developer. If it is not known to dissolve the charge adjuvant, then it cannot be known to aid dissolution using heat. Only the Applicant's own specification discloses dissolving a solid charge adjuvant, so it cannot be considered as known to aid such dissolution using heat. At least for such reasons, the cited combination cannot be considered to suggest the claimed limitation.

Further for example, claims 16-18 set forth that the charge adjuvant does not dissolve in the carrier liquid at a certain temperature, but remains dissolved therein, when dissolved at a higher temperature. The cited combination does not suggest and the Office Action does not allege that it suggests the subject matter of claims 16-18. Such claims are thus patentable.

Applicants respectfully request allowance of all pending claims.

The Examiner is requested to phone the undersigned if the Examiner believes such would facilitate prosecution of the present application. The undersigned is available for telephone consultation at any time during normal business hours (Pacific Time Zone).

Respectfully submitted,  
Tomer Spector

By: /James E. Lake/  
James E. Lake  
Reg. No. 44,854  
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